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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,773	05/09/2006	Shinichi Todoroki	052911	6200

38834	7590	12/11/2007
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EXAMINER
ROJAS, OMAR R

ART UNIT	PAPER NUMBER
2874	

MAIL DATE	DELIVERY MODE
12/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,773	Applicant(s) TODOROKI, SHINICHI	
	Examiner Omar Rojas	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 6-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> . |

DETAILED ACTION

Response to Amendment

1. With regards to the amendment filed on 09/21/2007, all the requested changes to the claims have been entered. Claims 1-3 and 6-8 are pending.

Response to Arguments

2. Applicant's arguments with respect to claims 1-3 and 6-8 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Patent No. US 6,218,658 B1 to Taneda et al. ("Taneda"). The Taneda patent was previously made of record.**

In re claims 1 and 7, Taneda discloses an optical fuse (see Figures 1-7) comprising:

a thermally sensitive material layer or medium **11** constituting a structure in which a light-emitting end of a first optical waveguide **2** is coupled to a light-incident end of a second optical waveguide **5** across said medium, said medium being transparent to light passing through said structure (**column 6, lines 1-3**); and

a light-heatable material layer or light-absorbing body **12** adapted to absorb a portion of said light and ignite to cause irreversible change to said medium by increased heat generation of said light-absorbing body when light intensity passing through said medium exceeds a critical light intensity (**column 6, lines 3-12 and lines 42-46**), said light-absorbing body **12** contacting at least a portion of an outer peripheral surface of said medium **11** in such a manner as to allow a part of light emitted from said light-emitting end into said medium to reach said light-absorbing body (**column 6, lines 29-42**),

wherein the optical fuse is for an optical circuit as shown in Figures 1 and 2 which transmits light while confining the light in the optical waveguides. See columns 6-7 of Taneda for further details.

5. **Claims 1, 2, and 6-8 are rejected under 35 U.S.C. 102(a) as being anticipated by Observation of Blowing out in Low Loss Passive Optical Fuse Formed in Silica Glass Optical Fiber Circuit to Todoroki et al. published in The Japan Society of Applied Physics, Vol. 34, No. 6A, hereinafter "the JSAP article". The JSAP article was previously made of record.**

In re claims 1 and 7, Taneda discloses an optical fuse (see Figures 1-2) comprising:

a medium ("necked glass bridge") constituting a structure in which a light-emitting end of a first optical fiber is coupled to a light-incident end of a second optical fiber across said medium, said medium being transparent to light passing through said structure; and

a light-absorbing body ("carbon coating") adapted to absorb a portion of said light and ignite to cause irreversible change to said medium by increased heat generation of said light-

absorbing body when light intensity passing through said medium exceeds a critical light intensity, said light-absorbing body contacting at least a portion of an outer peripheral surface of said medium in such a manner as to allow a part of light emitted from said light-emitting end into said medium to reach said light-absorbing body ,

wherein the optical fuse is for an optical circuit as shown in Figures 1 and 2 which transmits light while confining the light in the optical fibers. See the entire JSAP article for further details.

In re claims 2, 6, and 8, the additional limitations are clearly apparent from the JSAP article's disclosure.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. **Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taneda or the JSAP article as applied to claim 1 above, and further in view of Patent No. US 6,612,753 B1 to Cryan et al. ("Cryan").**

In re claim 3, Taneda or the JSAP article only differs from the claim in that neither reference teaches a fixing member for fixing the optical fiber, the fixing member being disposed away from an interface between the medium and the end of the optical fiber in such a way as to allow a zone of the optical fiber between the fixing member and the interface to bent. Cryan, on the other hand, discloses (see Figures 1 and 4) a fixing member 38/48 for fixing an optical fiber 12/44, the fixing member 38/48 being disposed away from an interface 24 between another

optical fiber 14/46 and the end of the optical fiber 12/44 in such a way as to allow a zone of the optical fiber 12/44 between the fixing member 38/48 and the interface 24 to bent. The motivation or suggestion for combining is mentioned by Cryan at column 1, lines 65-67, i.e. changing direction of the optical fiber in a small space. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention specified by claim 3 in view of Taneda or the JSAP article combined with Cryan.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Rojas whose telephone number is (571) 272-2357. The examiner can normally be reached on Monday-Friday (9:00PM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick, can be reached on (571) 272-2344. The official facsimile number for regular and After Final communications is (571) 273-8300. The examiner's RightFAX number is (571) 273-2357.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/Omar Rojas/
Patent Examiner, Art Unit 2874

or
December 8, 2007